VIPER®

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OWNER'S GUIDE

MODEL
4105V

Congratulations

Congratulations on the purchase of your state-of-the-art keyless entry and remote start system. Reading this Owner's Guide prior to using your system will help maximize the use of your system and its many features. Please visit: www.viper.com – For general and additional guide information. For any additional questions please contact your authorized Directed dealer or contact Directed at **1-800-753-0600** (U.S. only). Additional support is also available at: http://support.directed.com.

What's included

Welcome to the best generation of security. Your system contains everything you need.

- Two 4- button remote controls (P/N 7145V)
- Owner's guide and warranty registration card

Your warranty

Your system comes with a warranty. Make sure you receive the warranty registration card and proof of purchase from your dealer indicating the product was installed by an authorized Directed dealer. Please validate it online at **www.prodregister.com/directed** or complete and return the warranty registration card.

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Important information

Government Regulations and Safety information

Read the *Government Regulations* and *Warning! Safety First* sections of this manual prior to operating this system.

Warning! Failure to heed this information can result in death, personal injury or property damage and may also result in the illegal use of the system beyond its intended purpose.

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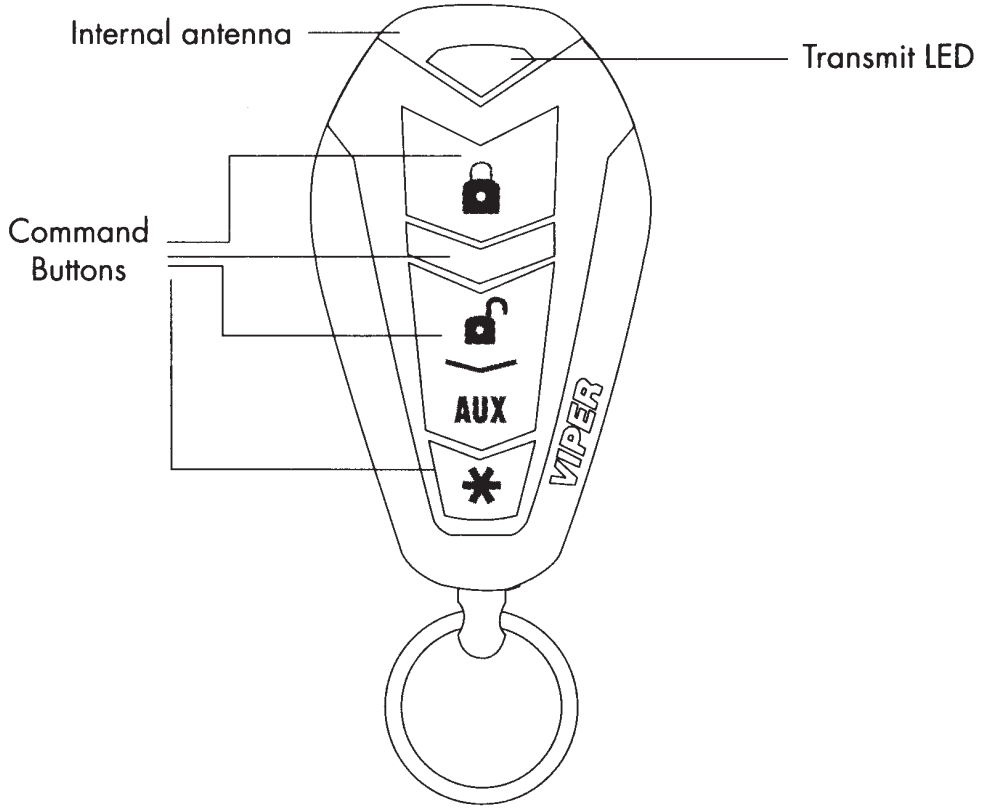
Remote Control



Feature	Description
Internal Antenna	Used for transmitting information
Transmit LED	Active when transmitting information
Command buttons (4)	Used to perform arming, disarming, auxiliary channel and remote start commands

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Remote control functions

The remote buttons are used to send commands to the system. The buttons indicated below are for standard configuration.

Standard configuration

Button

The lock function is controlled by pressing on the remote control for one second. When held for approximately two seconds, Panic is activated.

Button

The unlocking function is controlled by pressing on the remote control for one second. You can also turn Panic off with this button.

AUX Button

Silent Mode™ and an optional auxiliary function are controlled by pressing **AUX**. Silent Mode works by pressing **AUX** for less than one second before locking or unlocking. An optional auxiliary function such as trunk release may be controlled by pressing and holding **AUX** for approximately two seconds.

Button

The remote start function of your system is controlled by pressing this button for one second.

and AUX Buttons

Car Finder is controlled by pressing these two buttons.

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and and AUX Buttons

When simultaneously pressed these buttons control the optional rear window defogger during remote starting. The parking lights flash three times to confirm activation. Once activated the defogger will turn on whenever the vehicle is remote started.

The parking lights flash twice when the defogger is deactivated. The defogger does not turn on when the vehicle is remote started.

Important note: Defogger is an optional feature. Additional parts and labor may be required. See your Directed dealer for details.

and Buttons

Timer mode is activated when these buttons are pressed simultaneously. When you activate timer mode the parking lights flash four times, after a 1-second delay the engine starts. To turn the engine off, without exiting timer mode press the .

The system remains in timer mode and will start every 3 hours for a maximum of 6 starts unless cancelled by turning on the ignition, or by activating the brake or neutral safety shutdown wires.

The parking lights flash 4 times indicating timer mode is exited.

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Using the system

Locking

Pressing for one second locks the system (if the door locks are connected). The horn honks and the parking lights flash once to confirm the system is locked. The Failsafe® Starter Kill also activates and prevents the vehicle's starter from cranking.

Important note: Horn honk and Failsafe are both optional features.

Unlocking

Pressing for one second unlocks the doors (if connected). The horn honks twice and the parking lights flash twice to confirm unlocking of the system. The Failsafe Starter Kill is deactivated.

Disabling (optional) Starter Kill

If your remote control is lost or damaged, you can manually override the starter kill. To do this, you must have the vehicle's ignition key and know where the Valet button is located. Be sure to check with the installer for the location of the Valet button.

To override the starter kill, turn the ignition on and press and release the valet button within10 seconds. The vehicle should start. If it does not start, you may have waited too long; turn the ignition off and repeat the process.

Location of Valet button: _____

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Panic Mode

If you are threatened in or near your vehicle, you can attract attention by triggering the system with your remote control. Press for approximately two seconds to enter Panic Mode. In Panic Mode, the horn will honk and the parking lights will flash for 30 seconds. To stop Panic Mode at any time, press , or on the remote control.

Note: In order for Panic Mode to be effective, the vehicle's horn (or optional siren) and the vehicle's parking lights must be connected.

Remote Start

This feature allows you to remotely start and run your vehicle for a programmable period of time. This makes it possible to warm up the engine, and adjust the interior temperature of the vehicle with the climate control system. If interior heating or cooling is desired, the climate controls must be preset, and the fan blower must be set to the desired level prior to remote starting the vehicle.

Warning! (1) Never remote start your vehicle when the keys are in the ignition, except when performing Valet Take-Over, and (2) Never start the vehicle if it is not in PARK or NEUTRAL

To remote start the vehicle:

- Press the button on the remote control for 1 second.
- The parking lights flash to confirm that the vehicle is attempting to start. In gasoline vehicles the engine will start 4 seconds after the parking lights flash, in diesel vehicles the engine starts after the WAIT-TO-START timer has expired.
- Once the vehicle has started, it will run for the pre-programmed period of time (12, 24, or 60 minutes) or until a shutdown input

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is triggered.

Warning! It is unsafe to operate a vehicle's motor in a garage or other closed off area. Breathing the exhaust from the vehicle is hazardous to your health. Never activate the remote start in an enclosed space.

When you are ready to drive the vehicle:

1. Insert the ignition key and turn it to the ON (not the START) position.
2. Press the brake pedal. The remote start system shuts down and the engine continues to run because the ignition has been turned on.

Note: If the brake pedal is pressed before the key is in the ON position, the engine will shut down.

While the vehicle is running during remote start operation, the system monitors the vehicle and automatically shuts down the engine if it receives any of the following shut-down inputs:

- The brake pedal is pressed.
- The hood is opened.
- The shutdown toggle switch is put into the OFF position.
- The pre-programmed run time (12, 24, or 60 minutes) has elapsed.
- Remote control button ✳ is pressed once.

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Valet Take-Over

The Valet Take-Over feature allows the vehicle to remain running after the key has been removed from the ignition. This feature is useful for occasions when you wish to exit and lock the vehicle for short periods of time, but would like to leave the engine running and the climate controls on.

To perform Valet Take-Over:

1. Before turning off the engine, press and release ✲ on the remote control for 1 second.
2. Turn the ignition key to the OFF position. The engine will stay running until the pre-programmed time has elapsed or a shutdown input is received. (See the previous Remote Start section for a complete list of shut-down inputs.)

Important: This feature will not work if the brake pedal is being pressed.

Car Finder

Car finder allows you to locate your vehicle, by having the system flash the parking lights.

To activate:

1. Press and release the ✲ and **AUX** buttons at the same time.
2. The lights flash 5 times slowly allowing you to locate your vehicle.

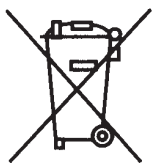
Battery Information

The remote control is powered by two 3V, CR2016 batteries. When the battery begins to weaken, operating range is reduced and the LED on the remote control dims.

Battery replacement

Locate the small slot on the side of the remote control. Insert a small slotted screwdriver or equivalent tool into slot and pry the case apart. Replace battery, while verifying the correct polarity and then snap case back together.

Battery Disposal



Directed cares about the environment. If you need to dispose of the battery, please do so in accordance with your municipal requirements for battery disposal.

Patent Information

This product is covered by one or more of the following United States patents:

Remote Start Patents:
5,349,931; 5,872,519; 5,914,667; 5,952,933; 5,945,936; 5,990,786; 6,028,372; 6,467,448; 6,561,151; 7,191,053; 7,483,783

Vehicle Security Patents:
5,467,070; 5,532,670; 5,534,845; 5,563,576; 5,646,591; 5,650,774; 5,673,017; 5,712,638; 5,872,519; 5,914,667; 5,952,933; 5,945,936; 5,990,786; 6,028,505; 6,452,484

Other patents pending

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Government Regulations

This device complies with Part 15 of FCC rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) This device must accept any interference received, including interference that may cause undesirable operation.

This equipment has been tested and found to comply with the limits for a class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television, which can be determined by turning the equipment OFF and ON, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio / TV technician for help.

This device complies with the Industry Canada Radio Standards Specification RSS 210. Its use is authorized only on a no-interference, no-protection basis; in other words, this device must not be used if it is determined that it causes harmful interference to services authorized by IC. In addition, the user of this device must accept any radio interference that may be received, even if this interference could affect the operation of the device.

Warning:

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this device.

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Warning! Safety first

The following safety warnings must be observed at all times:
Due to the complexity of this system, installation of this product must only be performed by an authorized Directed dealer.

When properly installed, this system can start the vehicle via a command signal from the remote control. Therefore, never operate the system in an enclosed area or partially enclosed area without ventilation (such as a garage). When parking in an enclosed or partially enclosed area or when having the vehicle serviced, the remote start system must be disabled using the installed toggle switch. It is the user's sole responsibility to properly handle and keep out of reach from children all remote control devices to assure that the system does not unintentionally remote start the vehicle. **THE USER MUST INSTALL A CARBON MONOXIDE DETECTOR IN OR ABOUT THE LIVING AREA ADJACENT TO THE VEHICLE. ALL DOORS LEADING FROM ADJACENT LIVING AREAS TO THE ENCLOSED OR PARTIALLY ENCLOSED VEHICLE STORAGE AREA MUST AT ALL TIMES REMAIN CLOSED.** These precautions are the sole responsibility of the user.

Use of this product in a manner contrary to its intended mode of operation may result in property damage, personal injury, or death. (1) Never remotely start the vehicle with the vehicle in gear, and (2) Never remotely start the vehicle with the keys in the ignition. The user must also have the neutral safety feature of the vehicle periodically checked, wherein the vehicle must not remotely start while the car is in gear. This testing should be performed by an authorized Directed dealer in accordance with the Safety Check outlined in the product installation guide. If the vehicle starts in gear, cease remote start operation immediately and consult with the authorized Directed dealer to fix the problem.

After the remote start module has been installed, contact your authorized dealer to have him or her test the remote start module by performing the Safety Check outlined in the product installation guide. If the vehicle starts when performing

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the Neutral Safety Shutdown Circuit test, the remote start unit has not been properly installed. The remote start module must be removed or the installer must properly reinstall the remote start system so that the vehicle does not start in gear. All installations must be performed by an authorized Directed dealer.

OPERATION OF THE REMOTE START MODULE IF THE VEHICLE STARTS IN GEAR IS CONTRARY TO ITS INTENDED MODE OF OPERATION. OPERATING THE REMOTE START SYSTEM UNDER THESE CONDITIONS MAY RESULT IN PROPERTY DAMAGE OR PERSONAL INJURY. YOU MUST IMMEDIATELY CEASE THE USE OF THE UNIT AND SEEK THE ASSISTANCE OF AN AUTHORIZED Directed DEALER TO REPAIR OR DISCONNECT THE INSTALLED REMOTE START MODULE. DIRECTED WILL NOT BE HELD RESPONSIBLE OR PAY FOR INSTALLATION OR REINSTALLATION COSTS.

Caution

This product is designed for fuel injected, automatic transmission vehicles only. Use of this product in a standard transmission vehicle is dangerous and contrary to the product's intended use.

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Limited lifetime consumer warranty

Directed Electronics. ("Directed") promises to the original purchaser to repair or replace (at Directed's election) with a comparable reconditioned model any Directed unit (hereafter the "unit"), excluding without limitation the siren, the remote transmitters, the associated sensors and accessories, which proves to be defective in workmanship or material under reasonable use during the lifetime of the vehicle provided the following conditions are met: the unit was purchased from an authorized Directed dealer, the unit was professionally installed and serviced by an authorized Directed dealer; the unit will be professionally reinstalled in the vehicle in which it was originally installed by an authorized Directed dealer; and the unit is returned to Directed, shipping prepaid with a legible copy of the bill of sale or other dated proof of purchase bearing the following information: consumer's name, telephone number and address; the authorized dealers name, telephone number and address; complete product description, including accessories; the year, make and model of the vehicle; vehicle license number and vehicle identification number. All components other than the unit, including without limitation the siren, the remote transmitters and the associated sensors and accessories, carry a one-year warranty from the date of purchase of the same. ALL PRODUCTS RECEIVED BY DIRECTED FOR WARRANTY REPAIR WITHOUT PROOF OF PURCHASE FROM AN AUTHORIZED DEALER WILL BE DENIED. This warranty is non-transferable and is automatically void if: the unit's date code or serial number is defaced, missing or altered; the unit has been modified or used in a manner contrary to its intended purpose; the unit has been damaged by accident, unreasonable use, neglect, improper service, installation or other causes not arising out of defects in materials or construction. The warranty does not cover damage to the unit caused by installation or removal of the unit. Directed, in its sole discretion, will determine what constitutes excessive damage and may refuse the return of any unit with excessive damage.

TO THE MAXIMUM EXTENT ALLOWED BY LAW, ALL WARRANTIES, INCLUDING BUT NOT LIMITED TO EXPRESS WARRANTY, IMPLIED WARRANTY, WARRANTY OF MERCHANTABILITY, FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF NON-INFRINGEMENT OF INTELLECTUAL PROPERTY, ARE EXPRESSLY EXCLUDED; AND DIRECTED NEITHER ASSUMES NOR AUTHORIZES ANY PERSON OR ENTITY TO ASSUME FOR IT ANY DUTY, OBLIGATION OR LIABILITY IN CONNECTION WITH ITS PRODUCTS. DIRECTED DISCLAIMS AND HAS ABSOLUTELY NO LIABILITY FOR ANY AND ALL ACTS OF THIRD PARTIES INCLUDING ITS AUTHORIZED DEALERS OR INSTALLERS. DIRECTED SECURITY SYSTEMS, INCLUDING THIS UNIT, ARE DETERRENTS AGAINST POSSIBLE THEFT. DIRECTED IS NOT OFFERING A GUARANTEE OR INSURANCE AGAINST VANDALISM, DAMAGE OR THEFT OF THE AUTOMOBILE, ITS PARTS OR CONTENTS; AND HEREBY EXPRESSLY DISCLAIMS ANY LIABILITY WHATSOEVER, INCLUDING WITHOUT LIMITATION, LIABILITY FOR THEFT, DAMAGE AND/OR VANDALISM. THIS WARRANTY DOES NOT COVER LABOR COSTS FOR MAINTENANCE, REMOVAL OR REINSTALLATION OF THE UNIT OR ANY CONSEQUENTIAL DAMAGES OF ANY KIND.

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IN THE EVENT OF A CLAIM OR A DISPUTE INVOLVING DIRECTED OR ITS SUBSIDIARY, THE VENUE SHALL BE SAN DIEGO COUNTY IN THE STATE OF CALIFORNIA. CALIFORNIA STATE LAWS AND APPLICABLE FEDERAL LAWS SHALL APPLY AND GOVERN THE DISPUTE. THE MAXIMUM RECOVERY UNDER ANY CLAIM AGAINST DIRECTED SHALL BE STRICTLY LIMITED TO THE AUTHORIZED DIRECTED DEALER'S PURCHASE PRICE OF THE UNIT. DIRECTED SHALL NOT BE RESPONSIBLE FOR ANY DAMAGES WHATSOEVER, INCLUDING BUT NOT LIMITED TO, ANY CONSEQUENTIAL DAMAGES, INCIDENTAL DAMAGES, DAMAGE TO VEHICLE, DAMAGES FOR THE LOSS OF TIME, LOSS OF EARNINGS, COMMERCIAL LOSS, LOSS OF ECONOMIC OPPORTUNITY AND THE LIKE. NOTWITHSTANDING THE ABOVE, THE MANUFACTURER DOES OFFER A LIMITED WARRANTY TO REPLACE OR REPAIR THE CONTROL MODULE SUBJECT TO THE CONDITIONS AS DESCRIBED HEREIN. THIS WARRANTY IS VOID IF THE UNIT HAS NOT BEEN PURCHASED FROM DIRECTED, OR AN AUTHORIZED DIRECTED DEALER, OR IF THE UNIT HAS BEEN DAMAGED BY ACCIDENT, UNREASONABLE USE, NEGLIGENCE, ACTS OF GOD, NEGLECT, IMPROPER SERVICE, OR OTHER CAUSES NOT ARISING OUT OF DEFECT IN MATERIALS OR CONSTRUCTION.

Some states do not allow limitations on how long an implied warranty will last or the exclusion or limitation of incidental or consequential damages. This warranty gives you specific legal rights and you may also have other rights that vary from State to State.

This warranty is only valid for sale of product(s) within the United States of America and in Canada. Product(s) sold outside of the United States of America or Canada are sold "AS-IS" and shall have NO WARRANTY, express or implied.

For further details relating to warranty information of Directed products, please visit the support section of Directed's website at: www.directed.com

This product may be covered by a Guaranteed Protection Plan ("GPP"). See your authorized Directed dealer for details of the plan or call Directed Customer Service at 1-800-876-0800.

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DIRECTED.

The company behind Viper® Auto Security Systems is Directed.

Since its inception, Directed has had one purpose, to provide consumers with the finest vehicle security and accessories available. The recipient of nearly 100 patents and Innovations Awards in the field of advanced electronic technology.

Quality Directed products are sold and serviced throughout North America and around the world.

Call **(800) 876-0800** for more information about our products and services.

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Directed is committed to delivering world class quality products and services that excite and delight our customers.

LMD415V0

Quick Reference Install Guide

Remote Start with Keyless Entry

Model 4105

Wiring Connections

Main Harness, 9-pin connector

1	LIGHT GREEN BLACK	(-) 200mA FACTORY ALARM DISARM
2	GREEN/WHITE	(-) 200mA FACTORY ALARM REARM
3	YELLOW	(+) IGNITION OUT (TO ALARM)
4	WHITE/BLUE	(-) ACTIVATION INPUT
5	ORANGE	(-) 500mA GROUND WHEN LOCKED/ANTI-GRIND OUTPUT
6	BROWN	(-) 200mA HORN OUTPUT
7	RED/WHITE	(-) 200mA TRUNK RELEASE OUTPUT
8	BLACK	GROUND
9	WHITE	(+/-) LIGHT FLASH OUTPUT

Door Lock, 3-pin connector

1	BLUE	(-) UNLOCK
2	EMPTY	NOT USED
3	GREEN	(-) LOCK

Remote start, 6-pin connector

1	RED	(+) (30A) HIGH CURRENT 12V INPUT
2	PINK/WHITE	OUTPUT TO SECOND IGNITION/ACCESSORY CIRCUIT
3	RED	(+) (30A) HIGH CURRENT 12V INPUT
4	ORANGE	OUTPUT TO ACCESSORY CIRCUIT
5	PURPLE	OUTPUT TO STARTER CIRCUIT
6	PINK	OUTPUT TO PRIMARY IGNITION CIRCUIT

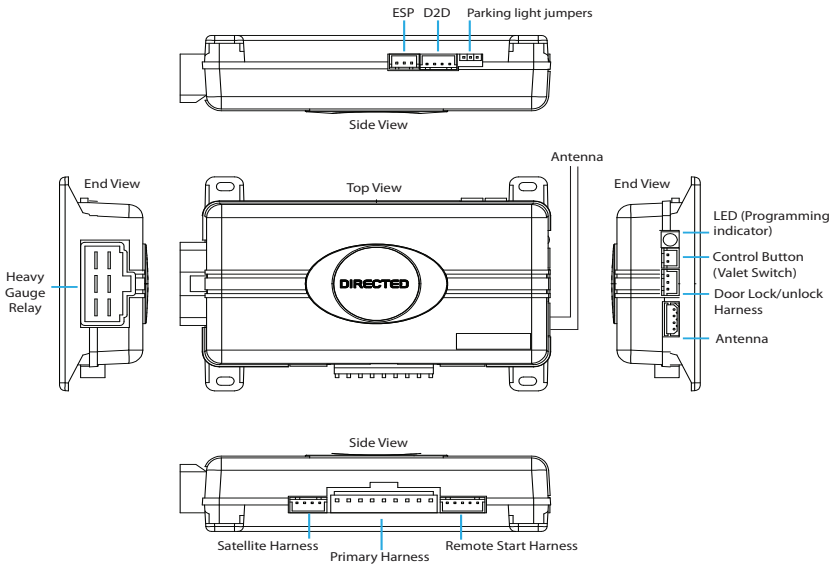
Satellite harness, 4-pin connector

1	BLUE	(-) 200mA STATUS OUTPUT
2	ORANGE	(-) 200mA ACCESSORY OUTPUT
3	PURPLE	(-) 200mA STARTER OUTPUT
4	PINK	(-) 200mA IGNITION OUTPUT

Remote Start harness, 5-pin connector

1	BLACK/WHITE	(-) NEUTRAL SAFETY SWITCH INPUT
2	VIOLET/WHITE	TACHOMETER INPUT WIRE
3	BROWN	(+) BRAKE SHUTDOWN INPUT WIRE
4	GRAY	(-) HOOD PIN SWITCH SHUTDOWN WIRE
5	BLUE/WHITE	(-) 200 mA 2ND STATUS/REAR DEFOGGER

Important: NEVER connect a 200mA low current output directly to a motor or high current device WITHOUT a relay.



Installation Points

Tach Learning

To learn the tach signal:

1. Start the vehicle with the key.
2. Within 5 seconds, press and hold the Valet button.
3. After 3 seconds the LED will light constant when the tach signal is learned.
4. Release the Valet button.

Important: This unit can learn the tachometer with the analog input or through d2d using an interface module. The unit confirms which source is used by flashing the parking lights. When programming tach learning with:

- Analog, the parking lights flash one time.
- D2D interface module, the parking lights flash twice.

If the tachometer input on the system is connected to the vehicle, the d2d tachometer input is ignored.

Virtual Tach

Note: Virtual tach is not recommended for diesel vehicles

To program Virtual Tach:

1. After the install is complete, remote start the car.
2. If the car does not start on the first attempt, let the remote start attempt again.
3. Once the car starts, let it run until the parking lights come on.
4. When the parking lights come on, shut off the remote start with the remote - that's it! Virtual Tach is programmed.

Virtual Tach handles disengaging the starter motor during remote starting – it does not address over-rev. If the customer wants to have the over-rev protection capability, the tach wire must be connected. This may involve more installation shop charges than initially quoted.

Important: If the Virtual Tach mode over cranks or doesn't crank the vehicle long enough to start and run the car, use the Bitwriter to add or subtract the starter output time. You can adjust the output time in increments of 50msec of the learned time using the Bitwriter.

Reset and Deletion

If a feature/virtual tach needs to be reset or the remote controls need to be deleted, use the following procedure.

1. Turn the ignition to the ON position (The heavy gauge pink wire must be connected).
2. Within 10 seconds, press and release the Valet button: 2 times if you want to delete remotes, 3 times to reset features or 4 times to reset virtual tach. These features are described next.

   Delete remotes: This feature erases all remotes from the memory of the system. This is useful in cases when a customer's remote is lost or stolen. Note: This does not reset the programmed features of the system or reset the Virtual Tach setting.

   Reset Features: This resets all features of the system to the factory default settings.
   Note: This feature does not delete the remotes from the system or reset the Virtual Tach setting

   Virtual Tach Reset: Deletes all previously learned values for Virtual Tach, and on the next remote start sequence the unit begins virtual tach initialization.

   Note: The "Zap" feature on the Bitwriter does not reset the Virtual tach setting.

3. Once you have selected the function step, press the Valet button once more and hold it. The LED flashes and the horn honks to confirm the selected functional step. Do not release the Valet button
4. While holding the Valet button, press the 🔒 button on the remote control. The horn honks to confirm that the feature has been successfully reset. Once the feature is reset, the Valet button can be released.

The routine exits if any of the following occurs:

- The ignition is turned off
- There is no activity for 30 seconds
- The valet button is pressed too many times

Remote Start Shutdown Diagnostics

Shutdown diagnostics: If the remote start activates but fails to stay running, the remote start module has the ability to inform you of what may have caused the remote start failure. Before performing shutdown diagnostics it is important that you let the remote start shut off on its own i.e. let it attempt to start 3 times then shut down, if this is not done the unit will report the shutdown you used to shut off the remote start.

Note: Shutdown diagnostics does not report if the vehicles factory immobilizer is causing the problem.

To perform shutdown diagnostics:

1. With the ignition Off, **press** and **hold** the Valet button.
2. **Turn** the ignition On and then back Off while **holding** the Valet button.
3. **Release** the Valet button.
4. **Press** and **release** the Valet button. The LED flashes to report the last shutdown for one minute or until the ignition is turned on, as shown in the following table:

LED Flashes	Shutdown Mode
1 flash	Timed out
2 flashes	Over-rev shutdown
3 flashes	Low or no RPM, low battery (voltage and virtual tach modes)
4 flashes	Transmitter shutdown (or optional push button)
5 flashes	(-) Hood Shutdown (5 pin Gray wire)
6 flashes	(+) Shutdown (5 pin Brown wire)
7 flashes	(-) Neutral safety shutdown (5 pin Black/White wire)
8 flashes	Wait-to-start timed out

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Programming System Features

The System Features Learn Routine dictates how the unit operates. It is possible to access and change most of the feature settings using the Valet button.

1. **Turn** the ignition on, then off.
2. **Select** a Menu. **Press** and **hold** the Valet button. The number of LED flashes and horn honks indicates the menu number. A single LED flash and honk indicates menu 1. Two LED flashes and 2 honks indicates menu 2.
3. When the desired menu LED flashes and honks are heard, **release** the Valet button.
4. **Select** a Feature. **Press** and **release** the Valet button the number of times corresponding to the feature you wish to change. Then **press** and **hold** one more time to select the feature. The LED flashes and the horn honks to indicate which feature is selected.
5. **Program** the Feature. While holding the Valet button, you can program the feature using the remote control.

For features with only two options; 🔒 = option 1 while 🔓 = option 2.
For features with more than two options; 🔓 selects the options in ascending order.
The LED flashes and the horn honks indicating which option is selected.

Once a feature is programmed:
- Other features can be programmed within the same menu
- Another menu can be selected
- The learn routine can be exited if programming is complete

To access another feature in the same menu:
1. **Press** and **release** the Valet button the number of times necessary to advance from the feature you just programmed to the next one you want to program.
2. Then **press** the Valet button once more and **hold** it.

To select another menu:
1. **Press** and **hold** the Valet button.
2. After 3 seconds, the unit advances to the next menu, the horn honks and LED flashes indicating which menu has been accessed.

The learn routine exits if any of the following occurs:
- The ignition is turned On
- There is no activity for 30 seconds
- The Valet button is pressed too many times

Bitwriter - Only Options

If programming with the Bitwriter®, the learn routine can be locked or unlocked. If the learn routine has previously been locked, it must be unlocked with Bitwriter® - this cannot be done manually with the Valet button.

The Bitwriter® gives you access to a wider range of system options. These features and the adjustments that may be programmed are described in the table below.

Menu Item	Feature	Default	Options
1	Engine Runtime	12 min.	1-60 min.
2	Diesel start type	Off	Timed
3	Diesel start delay time (seconds)	15 sec	1-90 sec.
4	Virtual Tach Fine Tune	Not initialized	0 to 1 second in 50 millisecond increments
5	Remote control programming	Unlocked	Locked
6	Feature Programming	Unlocked	Locked

Feature Menus

Default settings are in bold type.

Menu 1

Feature #	Feature	Opt. 1	Opt. 2	Opt. 3	Opt.4	Opt. 5+
1	Horn function	**Off**	Siren 20 mS	Siren 30 mS	Siren 40 mS	Siren 50 mS
2	Ignition controlled lock	On	**Off**			
3	Ignition controlled unlock	On	**Off**			
4	Doorlock output duration	**0.8 sec.**	3.5 sec.	0.4 sec.		
5	Double pulse unlock	**Off**	On			
6	Double pulse lock	**Off**	On			
7	Factory Alarm Disarm function	**with unlock**	Before unlock	Remote start only		
8	Factory Alarm Disarm Pulses	**Single**	Double			
9	Comfort Closure	Comfort Closure 1	**Off**	Comfort Closure 2		
10	Panic	**On**	Off			

Menu 2

Feature #	Feature	Opt. 1	Opt. 2	Opt. 3	Opt.4	Opt. 5+
1	Engine checking	**Virtual tach**	voltage	Off	tachometer	
2	Engine Runtime	**12 min**	24 min	60 min		
3	Park light output	Pulsed	**Constant**			
4	Cranking time	**0.6 sec.**	0.8 sec.	1.0 sec.	1.2 sec.	1.4, 1.6, 1.8, 2.0, 4.0 sec
5	Activation pulse count	**1 pulse**	2 pulses	3 pulses		
6	2nd Ignition behavior	**Ignition**	Accessory			
7	Accessory output	**Off during wait-to-start**	On during wait-to-start			
8	2nd Status behavior	**Normal**	Latch rear defogger	Pulse rear defogger		
9	Anti-grind	**On**	Off			
10	Diesel start delay	**Off**	Timed 15 sec	Timed 30 sec.	Timed 45 sec.	
11	Timer mode run time	**12 min**	3 min	6 min	9 min	

Remote Programming

1. Turn key to the ON position
2. Within 5 seconds, press and release Valet button one time.
3. Within 5 seconds, press and hold the Valet button. The LED will flash one time and the horn honks to confirm entry into remote programming.
4. Press the 🔒 button on the remote control.
5. The horn honks to confirm the remote has been programmed.
6. Release the Valet button, and turn the key to the Off position.
7. The horn sounds one long honk to confirm that remote programming has been exited.

The programming routine exits if any of the following occurs:
The ignition is turned off
There is no activity for 30 seconds
The Valet button is pressed too many times

Basic Remote Functions

ICON	BASIC COMMANDS	DESCRIPTION
🔒	LOCK	Pressing for one second locks the system (if the door locks are connected)
🔓	UNLOCK	Pressing for one second unlocks the doors (if connected)
✱	REMOTE START	Press to remotely start and run the vehicle for a programmable period of time or press to turn off if vehicle is already remote started
AUX	SILENT MODE/AUXILIARY FUNCTION	Silent Mode works by pressing this button for less than one second before locking or unlocking. This button can also be used for an optional auxiliary function such as trunk release

Note: See Owner's guide for more details

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Bitwriters with a date code of 6a or older require an IC upgrade (p/n 998M). Some bitwriters with a date code of 6B do not require the IC upgrade, refer to tech tip # 1112 for more information.

D2D DATA TO DATA™

The Bitwriter® (p/n 998U) requires chip version 2.7 or newer to program this unit.

See full Installation Guide for more detailed information on this system. More can be found online at: www.directechs.com

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Quick Reference Install Guide

Remote Start with Keyless Entry

Model 4105

Wiring Connections

Main Harness, 9-pin connector

1	LIGHT GREEN BLACK	(-) 200mA FACTORY ALARM DISARM
2	GREEN/WHITE	(-) 200mA FACTORY ALARM REARM
3	YELLOW	(+) IGNITION OUT (TO ALARM)
4	WHITE/BLUE	(-) ACTIVATION INPUT
5	ORANGE	(-) 500mA GROUND WHEN LOCKED/ANTI-GRIND OUTPUT
6	BROWN	(-) 200mA HORN OUTPUT
7	RED/WHITE	(-) 200mA TRUNK RELEASE OUTPUT
8	BLACK	GROUND
9	WHITE	(+/-) LIGHT FLASH OUTPUT

Door Lock, 3-pin connector

1	BLUE	(-) UNLOCK
2	EMPTY	NOT USED
3	GREEN	(-) LOCK

Remote start, 6-pin connector

1	PINK	OUTPUT TO PRIMARY IGNITION CIRCUIT
2	PURPLE	OUTPUT TO STARTER CIRCUIT
3	ORANGE	OUTPUT TO ACCESSORY CIRCUIT
4	RED	(+) (30A) HIGH CURRENT 12V INPUT
5	PINK/WHITE	OUTPUT TO SECOND IGNITION/ACCESSORY CIRCUIT
6	RED	(+) (30A) HIGH CURRENT 12V INPUT

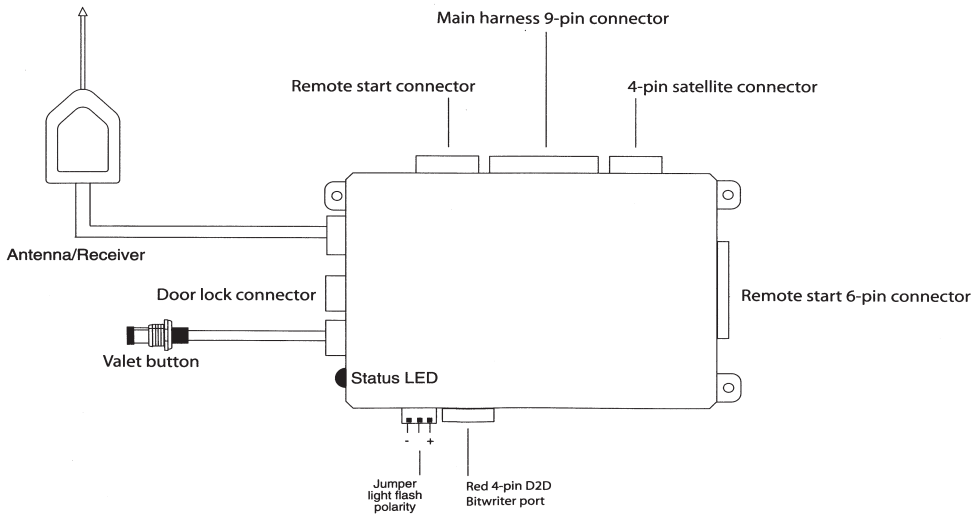
Satellite harness, 4-pin connector

1	BLUE	(-) 200mA STATUS OUTPUT
2	ORANGE	(-) 200mA ACCESSORY OUTPUT
3	PURPLE	(-) 200mA STARTER OUTPUT
4	PINK	(-) 200mA IGNITION OUTPUT

Remote Start harness, 5-pin connector

1	BLACK/WHITE	(-) NEUTRAL SAFETY SWITCH INPUT
2	VIOLET/WHITE	TACHOMETER INPUT WIRE
3	BROWN	(+) BRAKE SHUTDOWN INPUT WIRE
4	GRAY	(-) HOOD PIN SWITCH SHUTDOWN WIRE
5	BLUE/WHITE	(-) 200 mA 2ND STATUS/REAR DEFOGGER

Important: NEVER connect a 200mA low current output directly to a motor or high current device WITHOUT a relay.



Installation Points

Tach Learning

To learn the tach signal:

1. Start the vehicle with the key.
2. Within 5 seconds, press and hold the Valet button.
3. After 3 seconds the LED will light constant when the tach signal is learned.
4. Release the Valet button.

Important: This unit can learn the tachometer with the analog input or through d2d using an interface module. The unit confirms which source is used by flashing the parking lights. When programming tach learning with:

- Analog, the parking lights flash one time.
- D2D interface module, the parking lights flash twice.

If the tachometer input on the system is connected to the vehicle, the d2d tachometer input is ignored.

Virtual Tach

Note: Virtual tach is not recommended for diesel vehicles

To program Virtual Tach:

1. After the install is complete, remote start the car.
2. If the car does not start on the first attempt, let the remote start attempt again.
3. Once the car starts, let it run until the parking lights come on.
4. When the parking lights come on, shut off the remote start with the remote - that's it! Virtual Tach is programmed.

Virtual Tach handles disengaging the starter motor during remote starting – it does not address over-rev. If the customer wants to have the over-rev protection capability, the tach wire must be connected. This may involve more installation shop charges than initially quoted.

Important: If the Virtual Tach mode over cranks or doesn't crank the vehicle long enough to start and run the car, use the Bitwriter to add or subtract the starter output time. You can adjust the output time in increments of 50msec of the learned time using the Bitwriter.

Red 4-pin port, Bitwriter/ESP2 or D2D programming

The Red 4-pin plug may be configured as a Bitwriter/ESP2 or D2D port. The factory default is Bitwriter/ESP2 mode.

To use as D2D mode follow the below steps:

1. Make sure White/Blue activation wire is grounded.
2. Power the unit up. The system LED flashes for 5 seconds to confirm D2D mode change.
3. Remove the White/Blue wire from ground.

To change from D2D to Bitwriter/ESP2 mode:

1. Make sure the White/Blue activation wire is grounded.
2. Power the unit up, the system LED turns on solid for 5 seconds to confirm Bitwriter/ESP2 mode change.
3. Remove the White/Blue wire from ground.

The procedure can be repeated to toggle from one mode to the other.

Important: If you power up the system with the White/Blue activation wire ungrounded, the system LED will come on solid for 5 seconds indicating the system is in Bitwriter/ESP2 mode.

Reset and Deletion

If a feature/virtual tach needs to be reset or the remote controls need to be deleted, use the following procedure.

1. Turn the ignition to the ON position (The heavy gauge pink wire must be connected).
2. Within 10 seconds, press and release the Valet button: 2 times if you want to delete remotes, 3 times to reset features or 4 times to reset virtual tach. These features are described next.

   Delete remotes: This feature erases all remotes from the memory of the system. This is useful in cases when a customer's remote is lost or stolen. Note: This does not reset the programmed features of the system or reset the Virtual Tach setting.

   Reset Features: This resets all features of the system to the factory default settings.
   Note: This feature does not delete the remotes from the system or reset the Virtual Tach setting

   Virtual Tach Reset: Deletes all previously learned values for Virtual Tach, and on the next remote start sequence the unit begins virtual tach initialization.

   Note: The "Zap" feature on the Bitwriter does not reset the Virtual tach setting.

3. Once you have selected the function step, press the Valet button once more and hold it. The LED flashes and the horn honks to confirm the selected functional step. Do not release the Valet button
4. While holding the Valet button, press the 🔒 button on the remote control. The horn honks to confirm that the feature has been successfully reset. Once the feature is reset, the Valet button can be released.

The routine exits if any of the following occurs:

- The ignition is turned off
- There is no activity for 30 seconds
- The valet button is pressed too many times

Remote Start Shutdown Diagnostics

Shutdown diagnostics: If the remote start activates but fails to stay running, the remote start module has the ability to inform you of what may have caused the remote start failure. Before performing shutdown diagnostics it is important that you let the remote start shut off on its own i.e. let it attempt to start 3 times then shut down, if this is not done the unit will report the shutdown you used to shut off the remote start.

Note: Shutdown diagnostics does not report if the vehicles factory immobilizer is causing the problem.

To perform shutdown diagnostics:

1. With the ignition Off, **press** and **hold** the Valet button.
2. **Turn** the ignition On and then back Off while **holding** the Valet button.
3. **Release** the Valet button.
4. **Press** and **release** the Valet button. The LED flashes to report the last shutdown for one minute or until the ignition is turned on, as shown in the following table:

LED Flashes	Shutdown Mode
1 flash	Timed out
2 flashes	Over-rev shutdown
3 flashes	Low or no RPM, low battery (voltage and virtual tach modes)
4 flashes	Transmitter shutdown (or optional push button)
5 flashes	(-) Hood Shutdown (5 pin Gray wire)
6 flashes	(+) Shutdown (5 pin Brown wire)
7 flashes	(-) Neutral safety shutdown (5 pin Black/White wire)
8 flashes	Wait-to-start timed out

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Programming System Features

The System Features Learn Routine dictates how the unit operates. It is possible to access and change most of the feature settings using the Valet button.

1. **Turn** the ignition on, then off.
2. **Select** a Menu. **Press** and **hold** the Valet button. The number of LED flashes and horn honks indicates the menu number. A single LED flash and honk indicates menu 1. Two LED flashes and 2 honks indicates menu 2.
3. When the desired menu LED flashes and honks are heard, **release** the Valet button.
4. **Select** a Feature. **Press** and **release** the Valet button the number of times corresponding to the feature you wish to change. Then **press** and **hold** one more time to select the feature. The LED flashes and the horn honks to indicate which feature is selected.
5. **Program** the Feature. While holding the Valet button, you can program the feature using the remote control.

For features with only two options; 🔒 = option 1 while 🔊 = option 2.
For features with more than two options; 🔊 selects the options in ascending order.
The LED flashes and the horn honks indicating which option is selected.

Once a feature is programmed:
- Other features can be programmed within the same menu
- Another menu can be selected
- The learn routine can be exited if programming is complete

To access another feature in the same menu:
1. **Press** and **release** the Valet button the number of times necessary to advance from the feature you just programmed to the next one you want to program.
2. Then **press** the Valet button once more and **hold** it.

To select another menu:
1. **Press** and **hold** the Valet button.
2. After 3 seconds, the unit advances to the next menu, the horn honks and LED flashes indicating which menu has been accessed.

The learn routine exits if any of the following occurs:
- The ignition is turned On
- There is no activity for 30 seconds
- The Valet button is pressed too many times

Bitwriter - Only Options

If programming with the Bitwriter®, the learn routine can be locked or unlocked. If the learn routine has previously been locked, it must be unlocked with Bitwriter® - this cannot be done manually with the Valet button.

The Bitwriter® gives you access to a wider range of system options. These features and the adjustments that may be programmed are described in the table below.

Menu Item	Feature	Default	Options
1	Engine Runtime	12 min.	1-60 min.
2	Diesel start type	Off	Timed
3	Diesel start delay time (seconds)	15 sec	1-90 sec.
4	Virtual Tach Fine Tune	Not initialized	0 to 1 second in 50 millisecond increments
5	Remote control programming	Unlocked	Locked
6	Feature Programming	Unlocked	Locked

Feature Menus

Default settings are in bold type.

Menu 1

Feature #	Feature	Opt. 1	Opt. 2	Opt. 3	Opt.4	Opt. 5+
1	Horn function	**Off**	Siren 20 mS	Siren 30 mS	Siren 40 mS	Siren 50 mS
2	Ignition controlled lock	On	**Off**			
3	Ignition controlled unlock	On	**Off**			
4	Doorlock output duration	**0.8 sec.**	3.5 sec.	0.4 sec.		
5	Double pulse unlock	**Off**	On			
6	Double pulse lock	**Off**	On			
7	Factory Alarm Disarm function	**with unlock**	Before unlock	Remote start only		
8	Factory Alarm Disarm Pulses	**Single**	Double			
9	Comfort Closure	Comfort Closure 1	**Off**	Comfort Closure 2		
10	Panic	**On**	Off			

Menu 2

Feature #	Feature	Opt. 1	Opt. 2	Opt. 3	Opt.4	Opt. 5+
1	Engine checking	**Virtual tach**	voltage	Off	tachometer	
2	Engine Runtime	**12 min**	24 min	60 min		
3	Park light output	Pulsed	**Constant**			
4	Cranking time	**0.6 sec.**	0.8 sec.	1.0 sec.	1.2 sec.	1.4, 1.6, 1.8, 2.0, 4.0 sec
5	Activation pulse count	**1 pulse**	2 pulses	3 pulses		
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4. Press the 🔒 button on the remote control.
5. The horn honks to confirm the remote has been programmed.
6. Release the Valet button, and turn the key to the Off position.
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Basic Remote Functions

ICON	BASIC COMMANDS	DESCRIPTION
🔒	LOCK	Pressing for one second locks the system (if the door locks are connected)
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WARNING
VEHICLE EQUIPPED WITH A DEI® REMOTE START SYSTEM
If vehicle battery is disconnected, the system may attempt to start when the battery is reconnected or transmitter is used. Press brake to disengage. Check with vehicle owner to determine if hood pin switch or override switch was installed to disengage the system for service.
IMPORTANT SAFETY NOTICE

Please send products and other correspondence to:

Directed
1 Viper Way
Vista, CA 92081

XFR01-01

First-Class Postage Required
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DIRECTED®
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DENVER CO 80217-4391

DIRECTED®

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IMPORTANT

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☑ Efficient Warranty Service
In case there is a problem with your product

Or register online at www.prodregister.com/directed

IMPORTANT! IMPORTANT!

DIRECTED®

Please complete and return within the next 10 days or register online at productregister.com/directed.

XFR01

1. 1. ☐ Mr. 2. ☐ Mrs. 3. ☐ Ms. 4. ☐ Miss

First Name **Initial** **Last Name**

Street **Apt.**

City **State/Province** **Zip/Postal code**

E-mail address

2. Your date of birth: ___ / ___ (Month / Year)

3. Marital status: 01. ☐ Married 02. ☐ Single

4. Date of purchase: ___ / ___ / ___ (Month / Day / Year)

5. Model number:

6. Name of store where purchased:

7. Price paid: ___.___ *(excluding tax)*

8. Which Directed brand did you purchase?

01. ☐ Autostart
02. ☐ Avital
03. ☐ Clifford
04. ☐ Python
05 ☐ Vyper
06 ☐ Other

9. What type of product did you purchase?

01. ☐ Security system
02. ☐ Security system with remote start
03. ☐ Remote start system
04. ☐ Keyless entry system

10. In what vehicle will this product be used?

01. ☐ Car
02. ☐ Truck
03. ☐ SUV
04. ☐ Van
05. ☐ Minivan
06. ☐ Motorcycle
07. ☐ Boat
08. ☐ Motorhome
09. ☐ Other

Make of vehicle:

Model name:

VIN:

Year:

01. ☐ Bought new
02. ☐ Bought used
03. ☐ Leased new
04. ☐ Leased used

11. How did you first become aware of this product? *(check one)*

01. ☐ Local newspaper
02. ☐ Yellow pages
03. ☐ Magazine Ad
04. ☐ TV commercial
05. ☐ Magazine article/ review
06. ☐ Friend/Relative's recommendation
07. ☐ Radio commercial
08. ☐ Salesperson's recommendation
09. ☐ Motorsports sponsorship
10. ☐ Internet
11. ☐ Other

12. What factors most influenced the purchase? *(check up to three)*

01. ☐ Directed's reputation
02. ☐ Experience with Directed products
03. ☐ Experience with dealer
04. ☐ Value/Price
05. ☐ Special features
06. ☐ Warranty
07. ☐ Quality/Durability
08. ☐ Display in-store demo
09. ☐ Rebate/Promotion
10. ☐ Style/Design/Color
11. ☐ Dealer proximity
12. ☐ Friend's recommendation
13. ☐ Salesperson recommendation
14. ☐ Compatibility w/vehicle
15. ☐ Other

13. What benefits most influenced your decision to purchase this product? *(check up to three)*

01. ☐ Improved security
02. ☐ Improved convenience
03. ☐ Improved performance
04. ☐ Compatibility w/vehicle
05. ☐ Ease of installation
06. ☐ Style/Design/Color
07. ☐ Special features
08. ☐ Quality/Durability
09. ☐ Increase vehicle value
10. ☐ Functionality
11. ☐ Warranty
12. ☐ Price/Value
13. ☐ Rebate/Promotion
14. ☐ Immediate availability
15. ☐ Friend/Family's recommendation
16. ☐ Salesperson's recommendation
17. ☐ Dealer proximity

14. What other brands did you seriously consider before making this purchase?

01. ☐ No other brands considered
02. ☐ Other Directed brands
03. ☐ Code Alarm
04. ☐ Audiovox
05. ☐ Auto Page
06. ☐ Compustar
07. ☐ Prestige
08. ☐ Pursuit
09. ☐ Crime Stopper
10. ☐ Bulldog

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